School Psychology Review

School Climate Perception Among Latinx and White Students: An Examination of Intersecting Race/Ethnicity and Socioeconomic Identities in Context

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Abstract

Limited research has explored how the characteristics of student and teacher racial/ethnic composition may explain students' perceptions of school climate. This study used stratified analysis to assess the associations of two prominent diversity aspects (i.e., student racial/ethnic diversity and teacher racial/ethnic diversity) with students' perceived school climate. Particularly, this study controlled for student- and school-levels demographic characteristics among 41,237 Latinx students and 23,819 White students from 7th grade to 12th grade enrolled in 250 California public schools. The findings indicated that higher teacher racial/ethnic diversity had a mild to moderate positive association with perceived school attitudes to parental participation (Economically Disadvantaged Latinx: $\beta = .20$, $p < .05$; Economically Disadvantaged White: $\beta = .37$, $p < .01$) and perceived school equity and safety (Economically Disadvantaged Latinx: $\beta = .16$, $p < .05$; Economically Disadvantaged White: $\beta = .19$, $p < .05$) among Latinx and White students from economically disadvantaged backgrounds. Only Latinx students from economically disadvantaged backgrounds perceived less favorable school safety and equity in schools with a higher student racial/ethnic diversity (Economically Disadvantaged Latinx: $\beta = -.20$, $p < .05$). Results have implications for addressing school climate disparities at an organizational level.

Impact Statement

Although ecological theories have proposed that school climate perception is constructed by contextual and individual characteristics interactively, relatively little research has attempted to understand how school demographic compositions, such as teacher and student racial/ethnic diversity, interact with students' intersecting social identities in shaping perceived school climate. This study provided empirical evidence of the positive influences of teacher

2

DIVERSITY AND SCHOOL CLIMATE

racial/ethnic diversity on perceived school climate. This effect was observed among White and

Latinx students from economically disadvantaged backgrounds. Latinx students from

economically disadvantaged backgrounds perceived less safety and equity in schools with higher

racial/ethnic diversity.

Keywords: diversity, prevention, social justice, school-wide intervention

DIVERSITY AND SCHOOL CLIMATE

School Climate Perception Among Latinx and White Students: An Examination of

Intersecting Race/Ethnicity and Socioeconomic Identities in Context

Students' perceptions of school climate emerge from reciprocal interactions between

individual and contextual characteristics (La Salle et al., 2015). Research on students' perceived

school climate has been burgeoning (Thapa et al., 2013; Wang & Degol, 2016) because of its

positive impact on student's physical health, mental health, and educational outcomes

(Berkowitz et al., 2017; Wang & Degol, 2016). However, limited research has examined how

school demographic composition, a contextual characteristic within the school microsystem, may

shape school climate perception. Furthermore, an understanding of school diversity's association

with school climate from an intersectionality perspective is even more lacking. Emerging

evidence has shown systematic differences in perceived school climate depending on students'

intersecting identities (Adams & Roach, 2023). Apart from disparity in outcomes, an

intersectionality framework has helped to understand how and why multiply-minoritized (e.g.,

race and socioeconomic status) youth are at a higher risk for mental health problems (Patil et al.,

2018). Similarly, an intersectionality lens that attends to multiple aspects of identities may also

help understand differential mechanisms in school climate perception by students' intersecting

identities.

School racial/ethnic composition influences students' school climate perceptions, an

association that is likely to vary with their backgrounds (Rudasill et al., 2018). Race/ethnicity

and socioeconomic circumstances have been intertwined and associated with power and inequity

in structure in the U.S. (Graham, 2006; Park et al., 2013). Their associations with social power

are particularly relevant to the theoretical assumption of school diversity's impact built upon

power balance thesis. Intersecting socioeconomic and racial/ethnic identities affect individuals'

DIVERSITY AND SCHOOL CLIMATE

developmental contexts and outcomes (Henry et al., 2018). Thus, this study examines how

student and teacher racial/ethnic diversity is related to three aspects of school climate (i.e.,

school support, safety and equity, and school attitudes to parental participation) by student

groups with intersecting identities based on the race/ethnicity and socioeconomic background

(i.e., economically disadvantaged and non-economically disadvantaged) among White and

Latinx students in California public schools.

School Climate

School climate has been defined as the "cognitive and affect perceptions of social

interactions, relationships, safety, values, and beliefs held by students, teachers, administrators,

and staff within a school" (Rudasill et al., 2018, p. 46). This school climate definition is a

multidimensional construct, including the perceived quality of interpersonal relationships, school

safety, and shared norms and practices. There is rich evidence on the positive impact of school

climate, either based on students' or adults' reports, including a moderate effect in reduced

school violence (Steffgen et al., 2013) and increased academic achievement (Dulay & Karadağ,

2017), as well as mild to moderate relations with psychological outcomes (Ancheta et al., 2021;

Colvin et al., 2019). Despite variations in findings depending on study design and outcomes,

school climate is consistently found to be related to positive outcomes among students with mild

to moderate effect sizes. Nevertheless, after more than a decade of work in promoting school

climate for all students (U.S. Department of Education, 2007), underrepresented and

marginalized groups (e.g., racially/ethnically minoritized students) still perceive less favorable

interpersonal relationships, safety, and school support compared with their counterparts (Bottiani

et al., 2016; Konold et al., 2017; Voight et al., 2015). Even from the school staff's perspective,

schools with a high concentration of students from low-income backgrounds and students of

DIVERSITY AND SCHOOL CLIMATE

color have been found to have a less favorable school climate (Jain et al., 2015). Efforts to

improve the school climate among these schools and students are much needed. Based on a

review of studies using responses from students, school staff, and parents, school climate can

compensate for the adverse influences of low socioeconomic background on academic outcomes,

including alleviating the adverse contribution of low socioeconomic background to academic

outcomes (Berkowitz et al., 2017). In addition to other well-studied linkages with school climate

perception (e.g., interpersonal factors and school-wide practices), contextual factors are

conceptually expected to affect school climate perception but have been relatively less studied

(Rudasill et al., 2018).

Link Between School Diversity and School Climate

School diversity has received burgeoning attention among different school ecological

characteristics due to the increasingly diverse school environments in the U.S. and its conceptual

associations with students' educational and psychosocial outcomes (Graham, 2018; Juvonen et

al., 2019). School ecological characteristics may contribute to varied psychosocial experiences

across students (La Salle et al., 2015), resulting in a different perceived school climate for

various groups within the same school. Diversity has been commonly conceptualized as a

continuum constructed by the number of groups (e.g., Black, Latinx, White) and distribution

across groups (Rjosk et al., 2017; Teachman, 1980). A high level of diversity refers to a higher

number of groups and a more even distribution across groups (Graham, 2018).

Student Racial/Ethnic Diversity

Power balance theory provides a conceptual lens to consider the associations between

students' racial/ethnic diversity and their school climate perceptions. From this perspective,

students' perceived social power within a school context is differentiated by their status-based

6

DIVERSITY AND SCHOOL CLIMATE

identities and the relative number of group members sharing similar social identities (Agirdag et

al., 2011). Pondering the influences of race/ethnicity on students' school experiences (Author et

al., 2023; Graham et al., 2022), student racial/ethnic compositions likely influence students'

perception of school climate. School diversity is also empirically linked to group dynamics and

interpersonal relationships (Graham & Echols, 2018). However, the literature is uncertain on the

impact of school diversity on perceived school climate or its related constructs. A line of

empirical studies observed favorable effects of student racial/ethnic diversity on students'

perceived safety and trust (Juvonen et al., 2006, 2018; Lanza et al., 2018). For example, Juvonen

et al. (2018) studied a sample of Black, Latinx, White, and Asian students from public schools in

California. This study observed that a higher school-level student racial/ethnic diversity had a

mild to moderate association with higher levels of students' perceived safety and teacher fairness

and less loneliness and peer victimization.

Meanwhile, a negative association of student racial/ethnic diversity and minority

representation with school climate has also been evident within the empirical literature (DuPont-

Reyes & Villatoro, 2019; Munniksma et al., 2022; Parris et al., 2018). For example, Parris et al.

(2018) observed that when the percentage of minority groups increased in a school, students'

perceptions of the overall school climate slightly decreased ($\beta = . - .03\ to - .06$) among

309,327 middle school students from 629 schools in Georgia. Beyond the U.S. context, a study

conducted in the Netherlands found that societal dominant or marginalized groups perceived less

positive peer relations and more victimization experiences in classrooms with higher student

racial/ethnic diversity and concentration of students from a lower socioeconomic background

(Munniksma et al., 2022).

Most existing research has focused on student racial/ethnic diversity's association with a

DIVERSITY AND SCHOOL CLIMATE

few aspects of school climate without looking into other facets, such as school attitudes to parental participation. Perceived school attitudes to parental participation represents school partnership with parents and community, which has been suggested to be vital for student achievement (Wang & Degol, 2016). It may also be crucial to assess the association of school diversity with school attitudes to parental participation because school-wide and teachers-related variables, including teachers' bias, have been identified as barriers to parental engagement (Kim, 2009). Diversifying the teacher workforce may positively affect school attitudes to parental participation.

Teacher Racial/Ethnic Diversity

Teacher racial/ethnic diversity is a significant but frequently overlooked part of school diversity. At the state and federal levels, there has been renewed interest in diversifying the teacher workforce to combat injustice and prejudice (Sleeter et al., 2015). Arguments for diversification built upon the benefits of early and ongoing exposure to a diverse population in preventing bias and enhancing educational achievements support efforts to diversify the teacher workforce (Gershenson et al., 2021). The voices of teachers of color are theorized to improve equity and justice in educational procedures (Hughes et al., 2020; Lindsay & Hart, 2017), close racial/ethnic gaps in teachers' performance expectations for students (Gershenson et al., 2021), and lessen the likelihood that educators are unfamiliar with the cultures and learning preferences of their students (Blake et al., 2016). Moreover, as proposed by *power balance theory*, increased teacher racial/ethnic diversity indicates a more balanced representation of racially/ethnically minoritized groups in schools. Teachers play a central role in many decision-making processes as an authority (Hughes et al., 2020); more teachers from racially/ethnically minoritized backgrounds may be even more effective in enhancing the perceived power of students with

DIVERSITY AND SCHOOL CLIMATE

shared social identities. Several research studies documented a mild correlation between higher

teacher racial/ethnic diversity and reduced racial bullying and discrimination (Benner & Graham,

2011; Larochette et al., 2010). Despite strong theoretical underpinnings, little research has

examined the impact of teacher racial/ethnic diversity on various aspects of school climate

perception.

Interaction Between Students' Intersecting Identities and School Diversity

The Cultural-Ecological Model of School Climate and the Systems View of School

Climate offer multisystem frameworks to understand the formation of school climate perceptions

because they consider the reciprocal effects between contexts and individual characteristics (La

Salle et al., 2015; Rudasill et al., 2018). The Cultural-Ecological Model of School Climate

depicts the significance of cultural factors in varying how school climate is conceptualized and

formed (La Salle et al., 2015). One unique tenet of the Systems View of School Climate assumes

nanosystems mediate the impact of school on students' perceived school climate, referring to

interpersonal interactions in smaller social units in school (Rudasill et al., 2018). Although these

two theories emphasize different components in the multisystem framework, they theorize that

perceived school climate is a process resulting from the interplay between contextual and

individual factors and expect differential responses of students from different cultural

backgrounds to ecological factors. We hypothesize differential impacts of student and teacher

racial/ethnic diversity on students' perceived school climate.

An intersectionality lens recognizes how students' various social identities overlap and

how the structural advantages and disadvantages experienced by varied social groups affect

individuals' day-to-day lives (Purdie-Vaughns & Eibach, 2008; Syed & Ajayi, 2015).

Understanding people's lived experiences through their intersecting identities facilitates

DIVERSITY AND SCHOOL CLIMATE

effectively addressing oppressive institutional practices and enacting structural changes

(Rosenthal, 2016). Based on prior research indicating the relevance and ubiquity of interacting

effects between socioeconomic background and race/ethnicity, the junction between these two

layers of social identity is crucial (Henry et al., 2018). There has been relatively less work on

school climate from an intersectional framework, with limited evidence showing school climate

systematically differed across students with intersecting identities. Recently, Adams and Roach

(2023) documented that Black girl with and without special education services perceived a

slightly less favorable school climate than their White counterparts. Instead of focusing on

individual outcomes or group differences, guided by the intersectionality framework (Bauer,

2014), we investigate how school diversity, a contextual factor, may change students'

experiences in the existing school system that has been shown to oppress students from

racial/ethnic minoritized and low socioeconomic backgrounds (Henry et al., 2018).

　　　　In light of the possibility that these two diversity features may have various implications

for children with varied intersecting status-based identities, differential responses to student and

teacher racial/ethnic diversity across students from different racial/ethnic and socioeconomic

backgrounds are also conceptually expected. Notably, teacher racial/ethnic diversity may

influence students' school climate perceptions because of its hypothesized links with justice and

fairness in educational practices, less prejudice toward minority groups, and power balance

(Agirdag et al., 2011; Hughes et al., 2020; Lindsay & Hart, 2017). Student racial/ethnic diversity

is also proposed to lessen the power disparity in the educational setting (Fisher et al., 2015;

Graham, 2006). High teacher and student racial/ethnic diversity may have stronger associations

with school climate among students who perceive less social power and experience more

systematic suppression in the existing school system.

10

DIVERSITY AND SCHOOL CLIMATE

The Current Study

To better understand the interplay of students' intersecting racial/ethnic and

socioeconomic identities with school diversity in students' perceived school climate, this study

employed stratified analyses in a multilevel framework to examine how teacher racial/ethnic

diversity and student racial/ethnic diversity are differentially related to three aspects of school

climate (i.e., students' perceptions of school support, school safety, equity, and school attitudes

to parental participation). Rather than comparing outcomes across students, we aim to understand

how students with different identities experience schools with different diversity levels because

social stratification results in different developmental processes for youth (Coll et al., 1996).

Thus, we utilized stratified analysis without assuming that the effects of race/ethnicity and

socioeconomic backgrounds could be isolated. This approach allowed us to understand how the

association between school diversity and perceived school climate may present uniquely in

students with different social identities.

Considering the theoretical rationales of the influences of the two diversity aspects, this

study expected that the associations between the two diversity aspects and school climate would

differ across groups grounded in ecological models (La Salle et al., 2015; Rudasill et al., 2018).

This study anticipated that student and teacher racial/ethnic diversity would be positively

associated with the three aspects of school climate. Furthermore, these associations would be

stronger among students from economically disadvantaged backgrounds and racially/ethnically

minoritized groups. Additionally, this study included student-level demographics (gender, grade

level, and sexual orientation) and school-level factors (percentage of enrollment eligible for free

and reduced-price meals as a proxy for school-level socioeconomic composition, school size, and

school level) as covariates to reduce the risk of confounding in the analysis.

DIVERSITY AND SCHOOL CLIMATE

Method

Procedure and Participants

We collected school and student-level data for this study. School-level demographic data were extracted from the California Department of Education (CDE) public dataset. Student-level data was from the California Healthy Kids Survey (CHKS; WestEd, 2014), a biennial statewide survey conducted in California that inquires anonymously about student risk and resilience variables. Between October 2017 and June 2019, the sample for this study responded to the questionnaire. Trained school staff members designated to administer the CHKS followed a script informing pupils that the survey was voluntary and anonymous. Students voluntarily completed the survey during class time. Parents gave passive consent by following the protocol (see http://chks.wested.org/administer/instructions).

We extracted CHKS participating school information (students' racial/ethnic composition, number of students in the Free and Reduced Meals Program [FRMP], teachers' racial/ethnic composition, school size, and school level) from the CDE for the academic year of 2018–2019. The student-level CHKS data came from the 2017-2018 and 2018-2019 academic years. Given the CHKS dataset's characteristics and sample sizes of each group, we decided to focus on students who identified as Latinx and non-Latinx White. Enrollment in FRMP was an indicator of a student's socioeconomic background. The final sample included 41,237 Latinx and 23,819 non-Latinx White from 250 public schools in 98 school districts in California. Table 1 shows this study's participants' demographic information per race/ethnicity × socioeconomic status. Among the 250 participating schools, 16.5% were elementary schools, 38.6% were middle schools, and 44.9% were high schools. As measured by the Simpson's D index, the average student racial/ethnic diversity was 0.53 ($SD = 0.13$), and teacher racial/ethnic diversity

DIVERSITY AND SCHOOL CLIMATE

was 0.37 (*SD* = 0.18). The average percentage of students in the Free or Reduced-Price Meal

program was 54% (*SD* = 27%), and the average student enrollment was 1,012 (*SD* = 694).

Measures

School Level: Student and Teacher Racial/Ethnic Diversity

Student and teacher racial/ethnic diversity was measured with the Simpson's *D* formula

as seen in Equation 1, whereby, p_i is the proportion of the racial/ethnic group. Specifically,

$$Simpso's\ D\ Index = 1 - \sum p_i^2 \qquad (1)$$

Simpson's *D* has been widely used in school diversity research (Rjosk et al., 2017), assuming a

context is more diverse when there is a higher probability of randomly picking two persons from

different groups within a context (Simpson, 1949). Groups included in the calculation of the

statistic for all schools were the percentages of Black, White, Latinx, Asian (i.e., Asian and

Filipino), and Other (i.e., American Indian or Alaska Native, Pacific Islanders, and Two or More

Races) students/teachers in each participating school.

Student-Level: Students' Intersecting Identities

Two questions asked students about their race and ethnicity. Students reported six racial

identifications (*American Indian*, *Asian*, *Black or African American*, *Native Hawaiian or Pacific*

Islander, *White*, or *Mixed Race*) to the question "What is your race?" Students also reported if

they identified as Latinx. Only students who identified as non-Latinx White and Latinx were

included in the data analyses, because most participating schools had less than 10 respondents

identifying with other racial/ethnic groups. Students' socioeconomic background was indicated

by enrollment in Free or Reduced-Price Meal (FRPM) using three categories (yes, no, or don't

know), with students selecting "don't know" categorized the same as missing responses. FRPM,

as a proxy, sufficiently reflects students' educational disadvantages (Domina et al., 2018).

DIVERSITY AND SCHOOL CLIMATE

Students enrolled in FRPM were grouped as economically disadvantaged, with others as non-economically disadvantaged. Finally, based on these two questions, students were in four groups: (a) Non-Economically Disadvantaged Latinx, (b) Economically Disadvantaged Latinx, (c) Non-Economically Disadvantaged White, and (d) Economically Disadvantaged White).

Endogenous Variables

Safety and Equity. Three items measured school safety and equity. Items were rated on a 4-point response scale (1 = *not at all true*, 2 = *a little true*, 3 = *pretty much true*, and 4 = *very much true*). Example items are: "*I feel safe in my school.*" "*The teachers at this school treat students fairly,*" and "*My school is usually clean and tidy.*" The survey has previously reported validity and reliability evidence for various aspects of school climate (Hanson & Voight, 2014). A high mean score indicates a school being perceived as safer and more equitable. The omega values of each subscale's internal reliability for each group ranged from .69 to .71.

School Attitudes to Parental Participation. Three items measured students' perceived school attitudes to parental participation (Hanson & Voight, 2014). Example items are: "Parents feel welcome to participate in this school." and "School staff takes parent concerns seriously." A 4-point response scale (1 = *not at all true*, 2 = *a little true*, 3 = *pretty much true*, and 4 = *very much true*) was utilized. A higher value indicates a more favorable perception of schools' attitudes in parental participation in school. The omega values of the scales' internal reliability for each group ranged from .76 to .79.

School Support. Three items from the Social Emotional Health Survey-Secondary (SEHS-S; Author et al., 2020) measured students' perceived school social support. An example item is, "*At my school, there is a teacher or adult who always wants me to do my best.*" Items were rated on a 4-point response scale (1 = *not at all true*, 2 = *a little true*, 3 = *pretty much true*,

DIVERSITY AND SCHOOL CLIMATE

and 4 = *very much true*; Author et al., 2020). A high mean score on school support represents a

student's perceived higher quality and availability of support from school staff. The omega

values of each subscale's internal reliability for each group ranged from .85 to .88.

Control Variables

School and Student Demographics. School socioeconomic status was the percentage of

students enrolled in FRMP. The dataset included school enrollment and school level (elementary,

middle, or high school). Students reported their sexual orientation, grade level, and gender

identity, used as control variables because of their documented associations with students'

perception of school climate and engagement (e.g., Elmore & Huebner, 2010; Sansone, 2019).

Students responded to the gender identity item using a binary option (*female* or *male*); the

researchers recognize this is a limiting approach, however, it was the only data available from

the CHKS. Students reported their preferred sexual identification using six categories

(*straight*, *gay or lesbian*, *bisexual*, *I am not sure yet*, *something else*, or *declined to respond*).

Sexual identity was regrouped as *straight* and *sexual minorities*. These student-level

demographic variables were included in the analysis as categorical variables.

Data Analysis

We first reviewed the student data for missing responses and evaluated for patterns of

missingness. We then assessed descriptive statistics and correlations among the study variables.

A preliminary descriptive analysis examined the observed means of the outcomes and

demographic information of each racial/ethnic and socioeconomic status group (e.g., Non-

Economically Disadvantaged Latinx and Economically Disadvantaged Latinx). Non-

Economically Disadvantaged Latinx, Economically Disadvantaged Latinx, Non-Economically

Disadvantaged White, and Economically Disadvantaged White students were the units of

DIVERSITY AND SCHOOL CLIMATE

investigation in the stratified analysis. A series of multilevel regression models were estimated

using maximum likelihood estimation on Mplus 8.4 (Muthén & Muthén, 2017) by each

intersecting group of race/ethnicity and socioeconomic backgrounds.

Model building involves three steps (Peugh, 2010) to examine the effect of student and

teacher racial/ethnic diversity on the three aspects of school climate. First, the three school

climate outcomes were entered into the unconditional model without any covariates and

predictors to get intraclass correlation coefficients (ICCs). The ICCs were used to calculate the

design effect with a value greater than 2, indicating that a significant proportion of the variance

occurs across schools (Heck & Thomas, 2020). Second, the student-level predictors were added.

Predictors included at the student level were grade level, gender, and sexual orientation. Student-

level covariates were grand-mean centered on controlling its effects on the outcomes. The third

step was adding the school-level predictors (i.e., the percentage of students receiving FRMPs,

student and teacher racial/ethnic diversity, school level, and school size). Continuous variables at

the school level were grand-mean centered. Categorical variables were not centered at the school

level because they had meaningful zero values. The predictors' regression coefficients on the

three outcomes were estimated simultaneously because the correlations between the dependent

variables were then accounted for (Snijders & Bosker, 2011). Akaike and Bayesian information

criteria and likelihood ratio tests (Raudenbush and Bryk, 2002; Peugh, 2010) evaluated the

model comparison. Standardized coefficients were interpreted as effect sizes (Nieminen et al.,

2013). The model included the student-level and school-level predictor main effects. These data

analysis steps were repeated for each race/ethnicity x socioeconomic status group.

Missing Data

Missing data for the demographic (i.e., grade level) and dependent variables were all

16

DIVERSITY AND SCHOOL CLIMATE

under 5.0%, an acceptable level (Dong & Peng, 2013). However, the sexual orientation item had

6.1% missing responses in Economically Disadvantaged Latinx groups and 2.4%, 3.7%, and

4.8% missing responses in Economically Disadvantaged White and Non-Economically

Disadvantaged Latinx students, respectively. For the sexual orientation items, independent *t*-tests

evaluated if the missingness was significantly associated with the outcome responses for

Economically Disadvantaged Latinx students. There were statistical differences in safety and

equity and school attitudes to parental participation between those who responded to the sexual

orientation item and those not responding for the Economically Disadvantaged Latinx students,

but the effect size was small. Students' sexual orientations were controlled in the analyses. Data

were assumed to be missing at random (MAR; Enders, 2010). Analyses used full information

maximum likelihood (FIML) to manage missing data.

Results

Preliminary Analysis

Table 2 shows descriptive statistics of the three outcome variables by groups. Table 3

shows the ICCs and design effects. As suggested by ICCs, perceived school support had 3%

variances at the school level, perceived school attitudes to parental participation had 7% to 10%

school-level variances, and perceived school safety and equity had 10% to 13% of variances at

the school level. Although the design effects of outcomes in Economically Disadvantaged

Whites were smaller than two, we proceeded with multilevel analyses for the four groups, given

our research interests in the impact of school-level variables on students' perceived school

climate. Correlations among the endogenous variables were moderate (r = .25 to .41; see Table

4). At the school level, the percentage of enrollments in FRMP was negatively correlated with

student racial/ethnic diversity and positively correlated with teacher-student racial/ethnic

DIVERSITY AND SCHOOL CLIMATE

diversity.

Relations of Student and Teacher Racial/Ethnic Diversity and School Climate

Table 5 lists the fit statistics of the models, and Table 6 shows standardized coefficients

of models by the four student groups. Student racial/ethnic diversity was negatively associated

only with students' perceived safety and equity among Economically Disadvantaged Latinx

students ($\beta = -.20, p < .05$). Student racial/ethnic diversity was not significantly related to other

aspects of school climate across groups.

Regarding teacher racial/ethnic diversity, among White and Latinx students from

Economically Disadvantaged backgrounds, teacher racial/ethnic diversity was positively

associated with perceived school attitudes to parental participation (Economically Disadvantaged

Latinx students: $\beta = .16, p < .05$; Economically Disadvantaged White students: $\beta = .37, p <$

$.01$) and safety and equity (Economically Disadvantaged Latinx students: $\beta = .16, p < .05$;

Economically Disadvantaged White students: $\beta = .19, p < .01$). However, null results of these

relations were observed among students from Non-Economically Disadvantaged.

Student and School Characteristics

Regarding student characteristics, the results of multilevel analyses showed that sexual

minorities were negatively associated with the three aspects of school climate across groups (

$\beta = -0.04 - -0.16, p < .05$). Another consistent relation across student groups was higher

grade level relating to less positive perceived school attitudes to parental participation

($\beta = -0.12 - -0.17, p < .001$). For school characteristics, a higher concentration of FRMP

enrollment related to a less favorable perception of school climate across groups, particularly for

the school safety and equity domain. Table 6 also included the R-squared for each outcome by

student group. These models explained 16% to 60% of variances of the outcomes, with school

DIVERSITY AND SCHOOL CLIMATE

support having the most considerable portion of variances explained by the model.

Discussion

Considering the limited research on contextual factors contributing to school climate

perception, this study employed multilevel analysis to assess differential relations of teacher and

student racial/ethnic diversity with three aspects of school climate by race/ethnicity x

socioeconomic status among White and Latinx students. The results revealed that student

characteristics (i.e., gender, grade level, and sexual orientation) were consistently related to the

three school climate aspects across students with intersecting identities. Corresponding to the

Cultural-Ecological Model of School Climate and the Systems View of School Climate,

differential responses to school diversity were observed across students with different social

identities. Teacher racial/ethnic diversity was related positively to perceived school attitudes to

parental participation and safety and equity only among students from low socioeconomic

backgrounds. There was a negative association between student racial/ethnic diversity and

perceived safety and equity among Economically Disadvantaged Latinx students. The findings

provide evidence of the positive impact of diversifying the teacher workforce on school climate

perception for students from low socioeconomic backgrounds.

School Racial/Ethnic Diversity

Student racial/ethnic diversity was mildly associated with decreased perceived school

safety and equity. This finding is potentially attributed to the overall student demographic in

California public schools. The participating schools had an average of 51% enrollments from

Latinx students, and 53% had more than half of the total students identified as Latinx. That

means schools with higher student racial/ethnic diversity meant reduced numerical representation

of Latinx students in our sample, which may suggest Latinx students perceived less power in

DIVERSITY AND SCHOOL CLIMATE

those schools with higher student racial/ethnic diversity. However, the adverse impact of high student racial/ethnic diversity on perceived school safety and equity was only observed among Latinx students from low socioeconomic backgrounds but not Latinx students from higher socioeconomic backgrounds. Thus, it appears that having more same-racial/ethnic representation can be particularly important for students from racially/ethnically marginalized and economically disadvantaged backgrounds. With the continuous effort to desegregate public schools in the U.S., more attention should be placed on how students with different social identities may respond to these contextual changes.

Students from low socioeconomic backgrounds perceived more positive school attitudes to parental participation and school safety and equity when attending a school with higher teacher racial/ethnic diversity. A positive influence of teacher racial/ethnic diversity was observed for Latinx and White students from low socioeconomic backgrounds. However, we did not find a positive impact of teacher racial/ethnic diversity for student groups from high socioeconomic backgrounds. The findings suggest that teacher racial/ethnic diversity is particularly impactful to students from low socioeconomic backgrounds, and its positive impact benefits students of color and White students, with mild to moderate effect sizes. Such effects are more salient than prior studies on teacher racial/ethnic diversity (Benner & Graham, 2011; Larochette et al., 2010), potentially because our study examined teacher racial/ethnic diversity's impact on students' intersecting identities. The differential impact across students' socioeconomic backgrounds may be explained by teacher racial/ethnic diversity on school-wide practices, such as disciplinary measures (Sleeter et al., 2015), which could result in a more equitable and welcoming climate for students and parents from lower socioeconomic backgrounds. This study's results indirectly corroborated the hypothesis that a high teacher

20

DIVERSITY AND SCHOOL CLIMATE

racial/ethnic diversity likely enhances fairness and justice in school-wide practices (Hughes et al., 2020; Lindsay & Hart, 2017). Unlike the *power balance theory* implying high teacher racial/ethnic diversity has a more substantial influence among students from racial/ethnic marginalized backgrounds, Economically Disadvantaged White students reported better school climate. The findings suggest the "spillover" effect of racially/ethnically diverse teacher workforce on students with less social power due to marginalized identities not limited to their race/ethnicity. The impact of teacher racial/ethnic diversity on students with different social identities and its underlying mechanism warrants more research. Overall, the universal positive influences of having teachers from racial/ethnic diverse backgrounds observed in this study encourage more effort in diversifying the teacher workforce.

School and Student Characteristics

The current study's findings align with the literature regarding the negative impact of school or classroom socioeconomic composition on students' school climate (e.g., Voight et al., 2015). We observed a higher concentration of students from lower socioeconomic backgrounds negatively associated with school climate, having a moderate association with perceived safety and equity across student groups. This adverse impact was more substantial than student and teacher racial/ethnic diversity. Given the complex association of school socioeconomic composition with other school-level and community-level factors, this observation has various potential explanations. For instance, schools with more students from low socioeconomic backgrounds tend to have fewer quality teachers (Clotfelter et al., 2006; Ingersoll, 2004), higher teacher turnover rates (Simon & Johnson, 2015), and fewer school resources (Bettini et al., 2022). Solving these deep-rooted inequities requires structural and fundamental changes in policies governing education. In the meantime, research about what critical school- and

21

DIVERSITY AND SCHOOL CLIMATE

community-level factors mediate and moderate the associations would be meaningful to

minimize the discrepancy in students' perceived school climate across schools.

At the student level, regardless of racial/ethnic identities and socioeconomic

backgrounds, students who identified as sexual minorities reported a less favorable school

climate. These findings echoed the literature, showing that students who identified as sexual

minorities have encountered more barriers to having positive school experiences and engagement

(e.g., Allen et al., 2022; Fullarton, 2002; Ioverno & Russell, 2021). Overall, much smaller

portions of variances of school safety/equity and school attitudes to parental participation were

explained by the model compared with school support, reflecting distinctive mechanisms

contributed to different dimensions of school climate.

Practical Implications

The collective evidence from the current study combined with previous research on

student racial/ethnic diversity's impact on student outcomes implies its complex nature. A highly

diverse school context has a differential impact on students. Family, school, and community

factors, including students' social identities, likely moderated its influence. Differential

responses of students from different backgrounds to school diversity suggests that when

promoting and monitoring school climate, school psychologists and other administrators may

investigate the challenges students from racially/ethnically and socioeconomic minoritized

backgrounds encounter in response to a highly diverse student population to provide relevant

support. Concurrently, a positive association was found for teacher racial/ethnic diversity with

school safety and equity and perceived school attitudes to parental participation among students

from low socioeconomic backgrounds. This observation suggests that diversifying the teacher

workforce may be a promising way to address the lower perceived school climate observed

DIVERSITY AND SCHOOL CLIMATE

among students from low socioeconomic backgrounds. At the same time, school staff, such as

school psychologists, may work with teachers and administrators to improve cultural

responsiveness and equity in school practices and actively engage school members from different

backgrounds. Students identifying as sexual minorities across race/ethnicity and socioeconomic

backgrounds encountered challenges developing positive interpersonal relationships with school

staff and perceiving schools as safe and welcoming to them and their families. These

observations call for practices and continuous efforts to create an inclusive environment for

students, particularly those with less social power and marginalized identities.

Limitations and Future Directions

This study was a preliminary investigation of students' school experiences varying with

students' intersecting identities. Among this study's limitations, it only assessed student-level

intersections of race/ethnicity and socioeconomic background among White and Latinx students.

Moreover, students' socioeconomic background and gender identity were only measured as a

binary variable. Likewise, we categorized students reporting different sexual orientations into

"straight" and "sexual minorities." These groupings neglected more granular information about

socioeconomic backgrounds, gender identity, and sexual orientation. Future study is encouraged

to explore intersections across different status-based identities when studying school contextual

variables' impact on students. This study also did not capture dynamic and fluid aspects of

diversity, such as controlling classroom diversity and students' prior diversity experiences

(Graham, 2016).

Regarding the generalizability of the findings, this study only included public schools in

California and among Latinx and White students. To generalize the findings requires replication

studies using different data representing characteristics of other states and students. Replication

DIVERSITY AND SCHOOL CLIMATE

studies are warranted to gather information at the student-, classroom-, school-, community level,

and macrosystem to understand how to bolster students' learning and develop healthy

relationships with peers and adults from culturally rich and diverse backgrounds.

Conclusion

The current study contributed to the existing school climate research by examining how

school diversity aspects were related to students' school climate perception among Latinx and

White students from an intersectionality framework. The findings suggest that associations

between school diversity and school climate in school varied with school climate aspects and

differed across groups with different intersecting race/ethnicity identities and socioeconomic

backgrounds. This study is among the few studies empirically assessing the association between

teacher racial/ethnic diversity and school climate perception. The results suggest diversifying the

teacher workforce promotes positive school climate perception among students from low

socioeconomic backgrounds. Beyond socioeconomic and race/ethnicity, at the student level,

sexual minorities were consistently and robustly related to a less favorable perception of school

climate. At the school level, a higher concentration of poverty was associated with a less positive

school climate perception. Additional work is needed in schools to ensure all students experience

a diverse learning environment and a positive school climate.

24

DIVERSITY AND SCHOOL CLIMATE

Declaration of Interest Statement

The authors report there are no competing interests to declare.

DIVERSITY AND SCHOOL CLIMATE   25

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Table 1

Demographic Characteristics of Students by Stratification

Student-level Variable	Non-Economically Disadvantaged Latinx (n = 13,526)	Economically Disadvantaged Latinx (n = 31,221)	Non-Economically Disadvantaged White (n = 20,662)	Economically Disadvantaged White (n = 4,274)
Male	47.1%	46.1%	49.3%	49.9%
Sexual minorities	14.7%	14.5%	14.9%	20.6%
Grade 7	18.0%	22.2%	16.9%	22.4%
Grade 8	3.4%	6.2%	3.8%	5.3%
Grade 9	27.4%	28.8%	28.0%	28.2%
Grade 10	12.7%	10.5%	12.4%	10.4%
Grade 11	27.6%	24.7%	27.1%	26.3%
Grade 12	10.9%	7.6%	11.8%	7.5%

Table 2

Mean and Standard Deviation of Endogenous Variables by Stratification

Endogenous Variable	Non-Economically Disadvantaged Latinx (n = 13,526)	Economically Disadvantaged Latinx (n = 31,221)	Non-Economically Disadvantaged White (n = 20,662)	Economically Disadvantaged White (n = 4,274)
Safety and equity	3.52 (0.70)	3.47 (0.37)	3.64 (0.66)	3.50 (0.74)
Social support	3.01 (0.69)	2.96 (0.70)	3.17 (0.61)	3.05 (0.70)
School attitudes to parental participation	3.42 (0.72)	3.46 (0.69)	3.40 (0.75)	3.36 (0.79)

Table 3

Intraclass Correlation Coefficients and Design Effects by Stratification

Endogenous Variable	Non-Economically Disadvantaged Latinx	Economically Disadvantaged Latinx	Non-Economically Disadvantaged White	Economically Disadvantaged White
	ICC (Deff)	ICC (Deff)	ICC (Deff)	ICC (Deff)
Safety and equity	0.12 (6.48)	0.10 (12.50)	0.13 (11.57)	0.11 (1.98)
Social support	0.03 (3.78)	0.03 (3.75)	0.03 (2.67)	0.03 (0.54)
School attitudes to parental participation	0.07 (3.78)	0.07 (8.75)	0.10 (8.90)	0.08 (1.44)

Note. ICC = Intraclass Correlation Coefficients; Deff = Design Effects.

Table 4

Correlations of Continuous Variables by Stratification

Student-Level —Latinx	1	2	3	4
1. Safety and equity	—	.24***	.37***	
2. School support	.25***	—	.25***	
3. Parental participation	.39***	.26***	—	
Student-Level —White	1	2	3	
1. Safety and equity	—	.25***	.41***	
2. School support	.25***	—	.26***	
3. Parental participation	.38***	.26***	—	
School-Level	1	2	3	4
1. Percentage of enrollments in FRMP	—			
2. Student racial/ethnic diversity	-.54***	—		
3. Teacher racial/ethnic diversity	.38***	-.24***	—	
4. School Size	-.20**	.03	.17**	—

Note. Values of economically disadvantaged students were above the diagonal. Values of non-economically

disadvantaged students were below the diagonal. FRPM = Free and Reduced Price Meal.

**$p < .01$. ***$p < .001$.

Table 5

Model Fit Statistics by Stratification

Stratification	AIC	BIC	Sample size adjusted BIC	*LRT*
Non-Economically Disadvantaged Latinx				
No covariates	99510.436	99578.046	99549.445	—
Level 1	86218.342	86375.066	86308.330	9534.651***
Level 1 and level 2	83173.336	83485.404	83351.932	3178.548***
Economically Disadvantaged Latinx				
No covariates	226562.701	226637.840	226609.238	—
Level 1	193754.960	193928.974	193862.236	19850.800***
Level 1 and level 2	189400.073	189747.302	189613.827	4690.514***
Non-Economically Disadvantaged White				
No covariates	148732.358	148803.782	148775.181	—
Level 1	131506.840	131672.992	131606.255	10164.713***
Level 1 and level 2	127305.462	127438.936	127305.462	3993.960***
Economically Disadvantaged White				
No covariates	34539.466	34597.349	34568.750	—
Level 1	30313.070	30447.337	30380.608	3307.315***
Level 1 and level 2	29222.218	29489.351	29355.893	1141.643***

Note. AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; LRT = Likelihood Ratio Test.
***p < .001.

Table 6

Standardized Coefficients of Multilevel Analyses Predicting School Climate by Stratification

Non-Economically Disadvantaged Latinx (*n* = 12,459)	Safety and equity	School support	Parental participation
Student level			
Gender identity	-0.03 (0.01)**	-0.02 (0.01)*	-0.03 (0.01)**
Sexual minorities	-0.09 (0.01)***	-0.06 (0.01)***	-0.07 (0.01)***
Grade level	-0.05 (0.02)**	0.05 (0.02)**	-0.12 (0.02)***
School level			
% of FRPM	-0.57 (0.10)***	-0.17 (0.11)	-0.14 (0.12)
Student racial/ethnic diversity	-0.08 (0.08)	0.22 (0.11)	0.09 (0.11)
Teacher racial/ethnic diversity	0.04 (0.09)	-0.23 (0.09)*	0.08 (0.11)
Elementary school	-0.05 (0.10)	0.50 (0.12)***	0.22 (0.13)
Middle school	-0.30 (0.09)**	0.51 (0.14)***	-0.08 (0.14)
School size	-0.29 (0.08)***	-0.11 (0.09)	-0.26 (0.10)*
R^2	0.35***	0.60***	0.16*
Economically Disadvantaged Latinx (*n* = 28,778)	Safety and equity	School support	Parental participation
Student level			
Gender identity	-0.01 (0.01)	-0.01 (0.01)	0.04 (0.01)***
Sexual minorities	-0.07 (0.01)***	-0.04 (0.01)***	-0.16 (0.01)***
Grade level	-0.08 (0.02)***	0.01 (0.01)	-0.05 (0.01)***
School level			
% of FRPM	-0.55 (0.10)***	-0.20 (0.13)	-0.30 (0.12)*
Student racial/ethnic diversity	-0.20 (0.08)*	-0.09 (0.09)	-0.11 (0.10)
Teacher racial/ethnic diversity	0.16 (0.07)*	0.06 (0.08)	0.20 (0.02)*
Elementary school	-0.07 (0.09)	0.54 (0.09)***	0.12 (0.10)
Middle school	-0.26 (0.10)**	0.39 (0.10)***	-0.10 (0.11)
School size	-0.32 (0.08)***	-0.25 (0.08)**	-0.31 (0.09)**
R^2	0.26***	0.44**	0.18*
Non-Economically Disadvantaged White (*n* = 19,545)	Safety and equity	School support	Parental participation
Student level			
Gender identity	-0.03 (0.01)**	-0.02 (0.01)*	0.03 (0.01)*
Sexual minorities	-0.09 (0.01)***	-0.08 (0.01)***	-0.05 (0.01)***
Grade level	-0.08 (0.03)**	0.03 (0.02)*	-0.15 (0.02)***
School level			
% of FRPM	-0.47 (0.08)***	-0.13 (0.11)	-0.22 (0.10)*
Student racial/ethnic diversity	-0.04 (0.10)	0.09 (0.13)	0.07 (0.11)
Teacher racial/ethnic diversity	0.09 (0.10)	0.14 (0.11)	0.12 (0.10)
Elementary school	-0.01 (0.11)	0.25 (0.13)	0.17 (0.12)
Middle school	-0.22 (0.10)*	0.47 (0.13)***	-0.06 (0.12)
School size	-0.30 (0.10)**	-0.20 (0.11)	-0.27 (0.11)*
R^2	0.25***	0.34**	0.15*
Economically Disadvantaged White (*n* = 4,274)	Safety and equity	School support	Parental participation
Student level			
Gender identity	-0.04 (0.02)*	-0.03 (0.02)	-0.03 (0.02)
Sexual minorities	-0.07 (0.02)***	-0.07 (0.02)***	-0.04 (0.02)*
Grade level	-0.07 (0.03)*	0.01 (0.02)	-0.16 (0.03)***
School level			

% of FRPM	-0.55 (0.11)***	-0.29 (0.13)*	-0.39 (0.15)**
Student racial/ethnic diversity	-0.20 (0.12)	-0.02 (0.15)	-0.05 (0.15)
Teacher racial/ethnic diversity	0.19 (0.07)*	0.25 (0.14)	0.37 (0.12)**
Elementary school	-0.01 (0.13)	0.51 (0.15)***	0.26 (0.15)
Middle school	-0.09 (0.14)	0.64 (0.16)***	0.12 (0.19)
School size	-0.26 (0.11)*	-0.29 (0.16)	-0.26 (0.11)**
R^2	0.20**	0.46**	0.25*

Note. Parental participation = school attitudes to parental participation. FRPM = Free and Reduced Price Meal.

p < .05. **p* < .01. ***p* < .001.